



Massachusetts Department of Environmental Protection
Source Water Assessment and Protection (SWAP) Report
for
Concord Water Division

What is SWAP?

The Source Water Assessment Program (SWAP), established under the federal Safe Drinking Water Act, requires every state to:

- inventory land uses within the recharge areas of all public water supply sources;
- assess the susceptibility of drinking water sources to contamination from these land uses; and
- publicize the results to provide support for improved protection.

Susceptibility and Water Quality

Susceptibility is a measure of a water supply's potential to become contaminated due to land uses and activities within its recharge area.

A source's susceptibility to contamination does *not* imply poor water quality.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, disinfecting, filtering, or treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Actual water quality is best reflected by the results of regular water tests. To learn more about your water quality, refer to your water supplier's annual Consumer Confidence Reports.

Table 1: Public Water System Information

<i>PWS Name</i>	Concord Water Division
<i>PWS Address</i>	135 Keyes Road
<i>City/Town</i>	Concord, Massachusetts 01742
<i>PWS ID Number</i>	3067000
<i>Local Contact</i>	Alan Cathcart
<i>Phone Number</i>	(978) 318-3250

Introduction

We are all concerned about the quality of the water we drink. Drinking water sources may be threatened by many potential contaminant sources, including storm runoff, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures.

Refer to Table 3 for Recommendations to address potential sources of contamination. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes the following sections:

1. Description of the Water System
2. Land Uses within Protection Areas
3. Source Water Protection
4. Appendices

Glossary

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material (i.e. clay) that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. This area should be owned or controlled by the water supplier and limited to water supply activities.

Zone II: The primary recharge area for the aquifer. This area is defined by hydrogeologic studies that must be approved by DEP. Refer to the attached map to determine the land within your Zone II.

Zone A: is the most critical for protection efforts. It is the area 400 feet from the edge of the reservoir and 200 feet from the edge of the tributaries (rivers and/or streams) draining into it.

Zone B: is the area one-half mile from the edge of the reservoir but does not go beyond the outer edge of the watershed.

Zone C: is the remaining area in the watershed not designated as Zones A or B.

The attached map shows Zone A and your watershed boundary.

Section 1: Description of the Water System

Groundwater Sources

<i>Well Name</i>	<i>Source ID#</i>
Zone II #: 375	
Jennie Dugan Well	3067000-01G
Zone II #: 374	
Deaconess Well	3067000-03G
Zone II #: 376	
White Pond Well	3067000-04G
Zone II #: 373	
Second Division Well	3067000-05G
Zone II #: 372	
Robinson Well	3067000-06G
Zone II #: 479	
Hugh Cargill Wellfield	3067000-07G

Surface Water Sources

<i>Source Name</i>	<i>Susceptibility: High</i>
Nagog Pond	3067000-01S

The wells for the Concord Water Division are located within six separate water supply protection areas, with portions of the protection areas extending into the towns of Lincoln, Maynard, and Sudbury. Each well has a Zone I radius of 400 feet, except for the tubular wells that make up the Hugh Cargill Wellfield, which have a 250 foot Zone I radius. The wells are located in aquifers with a high vulnerability to contamination due to the absence of hydrogeologic barriers (i.e. confining clay layer) that can prevent contaminant migration. Please refer to the attached map of the Zone II. Nagog Pond and the associated water supply protection area is located in Acton and Littleton.

For current information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1 for a copy of the most recent Consumer Confidence Report. Drinking water monitoring reporting data is also available on the web at <http://www.epa.gov/safewater/ccr1.html>

Section 2: Land Uses in the Protection Areas

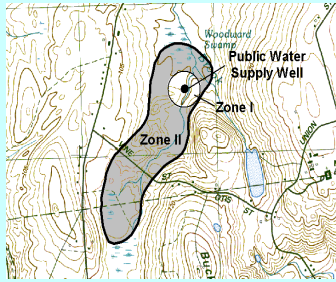
The Zone IIs and Zone C for Concord are primarily a mixture of forest, residential, and agriculture, with a small portion consisting of recreational and commercial land uses (refer to attached map for details). Land uses and activities that are potential sources of contamination are listed in Table 2, with further detail provided in the Table of Regulated Facilities and Table of Underground Storage Tanks in Appendix B.

Key Land Uses and Protection Issues include:

1. Activities in Zone A
2. Golf Course, Athletic Fields, and Agricultural activities
3. Residential Land Uses
4. Oil or Hazardous Material Contamination Sites
5. Comprehensive Wellhead Protection Planning

What is a Wellhead Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and a Zone II protection area.



The ranking of susceptibility to contamination for the Zone II of the Deaconess Well, White Pond Well, Second Division Well, Robinson Well, Hugh Cargill Wellfield, and the Zone C of the Nagog Pond is high, based on the presence of at least one high threat land use within the water supply protection areas, as seen in Table 2. The ranking of susceptibility to contamination for the Zone II of the Jenny Dugan Well is moderate, based on the presence of at least one moderate threat land use within the water supply protection areas, as seen in Table 2.

1. Activities in Zone A - Existing and future land use activities which may have an impact on surface water sources include: on-site septic systems; public and private recreational activities; untreated storm water runoff; uncontained storage of fertilizers, manure, domestic animals; new construction; spills along roads; above ground and underground storage tanks; erosion; and un-permitted and unauthorized activities.

Wild animals, farm animals, and domestic pets can be carriers of waterborne diseases such as Giardia, Cryptosporidium, Salmonella, etc. The following activities occur in the Zone A of the system's reservoir:

Nagog Pond - Roads, homes on private septic systems, agriculture, auto repair, stormdrains, and parking occurs throughout the Zone A of Nagog Pond.

Zone A Recommendations:

- ✓ To the extent possible, remove all activities from the Zone As to comply with DEP's Zone A requirements.
- ✓ Use BMPs for the storage, use, and disposal of hazardous materials such as water supply chemicals and maintenance chemicals.
- ✓ Storage of pesticides, fertilizers or road salt within the Zone A should be covered and contained.
- ✓ Keep any new prohibited activities out of the Zone A.

2. Golf Course, Athletic Fields, and Agricultural Activities – Pesticides and fertilizers have the potential to contaminate a drinking water source if improperly stored, applied, or disposed. If not contained or applied properly, animal waste from barnyards, manure pits and field application is a potential source of contamination to ground and surface water. If managed improperly, Underground and Aboveground Storage Tanks (USTs and ASTs) can be potential sources of contamination due to leaks or spills of the fuel oil they store.

Golf Course, Athletic Fields, and Agricultural Activities Recommendations:

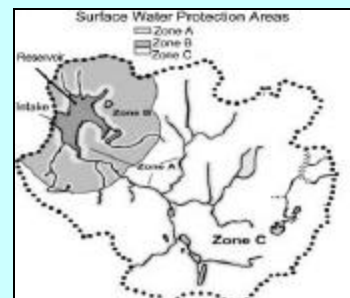
- ✓ Work with farmers in your protection areas to make them aware of your water supply and to encourage the use of a US Natural Resources Conservation Service (NRCS) farm plan to protect water supplies.
- ✓ Encourage golf course managers and athletic field directors, and farmers to incorporate an **Integrated Pest Management (IPM)** approach into their pest management program. IPM is an ecologically-based approach to pest control that links together several related components, including monitoring and scouting, biological controls, mechanical and/or other cultural practices, and pesticide applications. By combining a number of these different methods and practices, satisfactory pest control can be achieved with less impact on the environment.
- ✓ Promote **Best Management Practices (BMPs)** for fuel oil storage, hazardous material handling, storage, disposal, and emergency response planning.
- ✓ Work with golf courses, athletic fields, and farmers to ensure that pesticides and fertilizers are being stored within a structure designed to prevent runoff.

3. Residential Land Uses – If managed improperly, activities associated with residential areas can contribute to drinking water contamination. Common potential sources of contamination include:

(Continued on page 4)

What is a Watershed?

A watershed is the land area that catches and drains rainwater down-slope into a river, lake or reservoir. As water travels down from the watershed area it may carry contaminants from the watershed to the drinking water supply source. For protection purposes, watersheds are divided into protection Zones A, B and C.



- **Septic Systems** – Improper disposal of household hazardous chemicals to septic systems is a potential source of contamination to the groundwater because septic systems lead to the ground. If septic systems fail or are not properly maintained they can be a potential source of microbial contamination.
- **Household Hazardous Materials** - Hazardous materials may include automotive wastes, paints, solvents, pesticides, fertilizers, and other substances. Improper use, storage, and disposal of chemical products used in homes are potential sources of contamination.
- **Heating Oil Storage** - If managed improperly, Underground and Aboveground Storage Tanks (USTs and ASTs) can be potential sources of contamination due to leaks or spills of the fuel oil they store.
- **Storm water** – Catch basins transport storm water from roadways and adjacent properties to the ground. As flowing storm water travels, it picks

What are "BMPs?"

Best Management Practices (BMPs) are measures that are used to protect and improve surface water and groundwater quality. BMPs can be structural, such as oil & grease trap catch basins, nonstructural, such as hazardous waste collection days or managerial, such as employee training on proper disposal procedures.

up debris and contaminants from streets and lawns. Common potential contaminants include lawn chemicals, pet waste, and contaminants from automotive leaks, maintenance, washing, or accidents.

Residential Land Use Recommendations:

- ✓ Educate residents on best management practices (BMPs) for protecting water supplies. Distribute the fact sheet "Residents Protect Drinking Water" available in Appendix A and on www.mass.gov/dep/brp/dws/protect.htm, which provides BMPs for common residential issues.
- ✓ Work with planners to control new residential developments in the water supply protection areas.
- ✓ Promote BMPs for storm water management and pollution controls.

4. Presence of Oil or Hazardous Material Contamination Sites – The Zone IIs contain DEP Tier Classified Oil and/or Hazardous Material Release Sites indicated on the map as Release Tracking Numbers 3-0000435, 3-0018998 and 3-0019129. Refer to the attached map and Appendix 3 for more information.

Oil or Hazardous Material Contamination Sites Recommendation:

- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination sites.

5. Protection Planning – Protection planning protects drinking water by managing the land area that supplies water to a well. A Wellhead and Surface Water Protection Plan coordinates community efforts, identifies protection strategies, establishes a timeframe for implementation, and provides a forum for public participation. There are resources available to help communities develop a plan for protecting drinking water supply wells.

Protection Planning Recommendations:

- ✓ Establish a protection team, and refer them to <http://mass.gov/dep/brp/dws/protect.htm> for a copy of DEP's guidance, "Developing a Local Wellhead Protection Plan" and "Developing a Local Surface Water Supply Protection Plan".

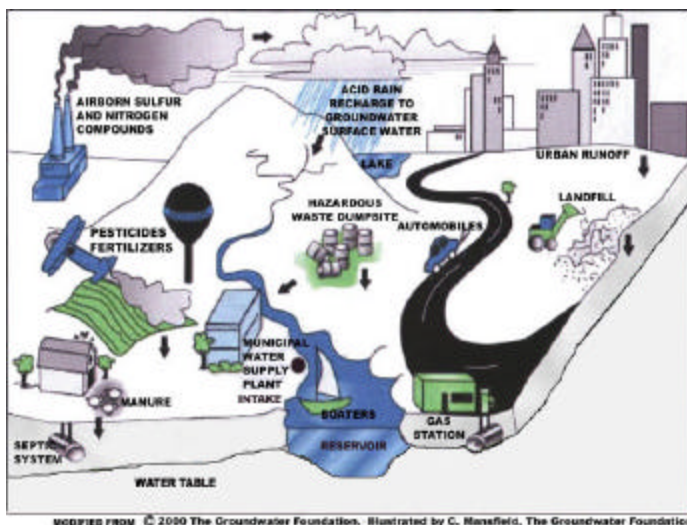


Figure 1: Sample watershed with examples of potential sources of contamination

- ✓ Coordinate efforts with local officials to compare local wellhead and surface water protection controls with current MA Wellhead Protection Regulations 310 CMR 22.21(2) and Surface Water Supply Protection Regulations 310 CMR 22.20B and 310 CMR 22.20C. If there are no local controls or they do not meet the current regulations, adopt controls that meet 310 CMR 22.21(2), 310 CMR 22.20B and 310 CMR 22.20C. For more information on DEP land use controls see <http://mass.gov/dep/brp/dws/protect.htm>.
- ✓ If local controls do not regulate floor drains, be sure to include floor drain controls that meet 310 CMR 22.21(2).

Other land uses and activities within the Zone II that

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Potential Source of Contamination vs. Actual Contamination

The activities listed in Table 2 are those that typically use, produce, or store contaminants of concern, which, if managed improperly, are potential sources of contamination (PSC).

It is important to understand that a release may never occur from the potential source of contamination provided facilities are using best management practices (BMPs). If BMPs are in place, the actual risk may be lower than the threat ranking identified in Table 2. Many potential sources of contamination are regulated at the federal, state and/or local levels, to further reduce the risk.

Table 2: Land Use in the Watershed

For more information, refer to Appendix B: Regulated Facilities within the Water Supply Protection Area

Land Uses	Quantity	Threat	Zone II Number	Zone C Source ID	Potential Contaminant Sources*
Agricultural					
Fertilizer Storage or Use	6	M	374, 376, 479	01S	Leaks, spills, improper handling, or over-application of fertilizers
Manure Storage or Spreading	2	H	372, 374		Improper handling of manure (microbial contaminants)
Pesticide Storage or Use	6	H	374, 376, 479	01S	Leaks, spills, improper handling, or over-application of pesticides
Commercial					
Auto Repair Shops/ Service Stations	1	H		01S	Spills, leaks, or improper handling of automotive fluids, and solvents
Gas Stations	1	H	479		Spills, leaks, or improper handling or storage of automotive fluids and fuels
Golf Courses	1	M	374		Over-application or improper handling of fertilizers or pesticides
Medical Facilities	1	M	374		Spills, leaks, or improper handling or storage of biological, chemical, and radioactive wastes
Nursing Homes	1	L	374		Microbial contaminants
Railroad Tracks and Yards	1	H	479		Over-application or improper handling of herbicides, leaks or spills of transported chemicals and maintenance chemicals; fuel storage
Residential					
Fuel Oil Storage (at residences)	Numerous	M	372, 373, 374, 375, 376, 479	01S	Spills, leaks, or improper handling of fuel oil
Lawn Care/ Gardening	Numerous	M	372, 373, 374, 375, 376, 479	01S	Over-application or improper storage and disposal of pesticides
Septic Systems/ Cesspools	Numerous	M	372, 373, 374, 375, 376, 479	01S	Microbial contaminants, and improper disposal of hazardous chemicals

Land Uses	Quantity	Threat	Zone II Number	Zone C Source ID	Potential Contaminant Sources*
Miscellaneous					
Aboveground Storage Tanks	1	M	374		Spills, leaks, or improper handling of materials stored in tanks
Aquatic Wildlife	Numerous	L	372	01S	Microbial contaminants
Fishing/Boating	2	L	373, 376		Fuel and other chemical spills, microbial contaminants
Landfills and Dumps	2	H	373		Seepage of leachate
Oil or Hazardous Material Sites	3	--	374, 376		Tier Classified Oil or Hazardous Materials Sites are not ranked due to their site-specific character. Individual sites are identified in Appendix B.
Schools, Colleges, and Universities	5	M	374, 375, 376, 479		Spills, leaks, or improper handling or storage of fuel oil, laboratory, art, photographic, machine shop, and other chemicals
Small quantity hazardous waste generators	3	M	374		Spills, leaks, or improper handling or storage of hazardous materials and waste
Storm water Drains/ Retention Basins	Numerous	L	372, 373, 374, 375, 376, 479	01S	Debris, pet waste, and chemicals in storm water from roads, parking lots, and lawns
Transportation Corridors	3	M	479	01S	Accidental leaks or spills of fuels and other hazardous materials, over-application or improper handling of pesticides
Underground Storage Tanks	7	H	374, 479		Spills, leaks, or improper handling of stored materials
Very Small Quantity Hazardous Waste Generator	1	L	479		Spills, leaks, or improper handling or storage of hazardous materials and waste
Notes: <ol style="list-style-type: none"> When specific potential contaminants are not known, typical potential contaminants or activities for that type of land use are listed. Facilities within the watershed may not contain all of these potential contaminant sources, may contain other potential contaminant sources, or may use Best Management Practices to prevent contaminants from reaching drinking water supplies. For more information on regulated facilities, refer to Appendix B: Regulated Facilities within the Water Supply Protection Area information about these potential sources of contamination. For information about Oil or Hazardous Materials Sites in your protection areas, refer to Appendix C: Tier Classified Oil and/or Hazardous Material Sites. <ul style="list-style-type: none"> THREAT RANKING - The rankings (high, moderate or low) represent the relative threat of each land use compared to other PSCs. The ranking of a particular PSC is based on a number of factors, including: the type and quantity of chemicals typically used or generated by the PSC; the characteristics of the contaminants (such as toxicity, environmental fate and transport); and the behavior and mobility of the pollutants in soils and groundwater. 					

(Continued from page 4)

are potential sources of contamination are included in Table 2. Refer to Appendix B for more information about these land uses. Identifying potential sources of contamination is an important initial step in protecting your drinking water sources. Further local investigation will provide more in-depth information and may identify new land uses and activities that are potential sources of contamination. Once potential sources of contamination are identified, specific recommendations like those below should be used to better protect your water supply.

Section 3: Source Water Protection Conclusions and Recommendations

Current Land Uses and Source Protection:

As with many water supply protection areas, Concord's Zone IIs and Zone C contain potential sources of contamination. However, source protection measures reduce the risk of actual contamination, as illustrated in Figure 2. The water supplier is commended for taking an active role in promoting source protection measures in the Water Supply Protection Areas through:

- Developing a Groundwater Conservancy District in 1982, with a revision in 2001 to meet land use controls established by Massachusetts Drinking Water Regulations 310 CMR 22.21. The Planning Board is the governing body over the District.
- Developing and adopting a Toxic and Hazardous Material bylaw, which is governed by the Board of Health.
- Joint audit project between the Board of Health and the Water Division
- The acquisition of a considerable portion of source protection areas, and the continued pursuit of additional land for the purpose of source protection.
- Active notification program to the Water Division in the event of a hazardous material release in a Zone II, and also for the removal of underground storage tanks in a Zone II.
- Advanced water quality monitoring program at Nagog Pond that includes a multi-level monitoring scheme to address source protection issues, including early warning monitoring.
- Conducting a comprehensive wastewater plan with a focus on Zone II areas, especially to look at the impacts from Title 5 septic systems.
- Directing drainage from the section of Route 2A that runs along Nagog Pond to an area outside the watershed, and for directing the drainage from the shopping complex into Little Nagog Pond, which also drains to an area outside of the watershed.

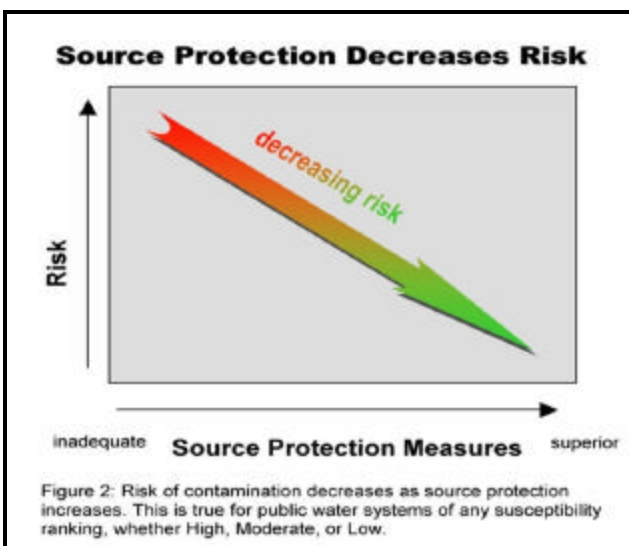
Source Protection Recommendations:

To better protect the sources for the future:

- ✓ Inspect the Zone I and Zone A regularly, and when feasible, remove any non-water supply activities.
- ✓ Educate residents on ways they can help you to protect drinking water sources.
- ✓ Work with emergency response teams to ensure that they are aware of the storm water drainage in your Zone II and Zone C, and to cooperate on responding to spills or accidents.
- ✓ Partner with local businesses to ensure the proper storage, handling, and disposal of hazardous materials.
- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination sites.
- ✓ Work with farmers in your protection areas to make them aware of your water supply and to encourage the use of a NRCS farm plan to protect water supplies.

Top 5 Reasons to Develop a Local Wellhead and Surface Water Protection Plan

- ➊ Reduces Risk to Human Health
- ➋ Cost Effective! Reduces or Eliminates Costs Associated With:
 - ♦ Increased monitoring and treatment
 - ♦ Water supply clean up and remediation
 - ♦ Replacing a water supply
 - ♦ Purchasing water
- ➌ Supports municipal bylaws, making them less likely to be challenged
- ➍ Ensures clean drinking water supplies for future generations
- ➎ Enhances real estate values – clean drinking water is a local amenity. A community known for its great drinking water in a place people want to live and businesses want to locate.



Conclusions:

These recommendations are only part of your ongoing local drinking water source protection. Additional source protection recommendations are listed in Table 3, the Key Issues above and Appendix A. DEP staff, informational documents, and resources are available to help you build on this SWAP report as you continue to improve drinking water protection in your community.

The Department's Wellhead Protection Grant Program and Source Protection Grant Program provide funds to assist public water suppliers in addressing water supply source protection through local projects. Protection recommendations discussed in this document may be eligible for funding under the Grant Program. **Please note:** each spring DEP posts a new Request for Response for the grant program (RFR).

Other grants and loans are available through the Drinking Water State Revolving Loan Fund, the Clean Water State Revolving Fund, and other sources. For more information on grants and loans, visit the Bureau of Resource Protection's Municipal Services web site at: <http://mass.gov/dep/brp/mf/mfpubs.htm>.

The assessment and protection recommendations in this SWAP report are provided as a tool to encourage community discussion, support ongoing source protection efforts, and help set local drinking water protection priorities. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures. The water supplier should supplement this SWAP report with local information on potential sources of contamination and land uses. Local information should be maintained and updated periodically to reflect land use changes in the Zone II. Use this information to set priorities, target inspections, focus education efforts, and to develop a long-term drinking water source protection plan.

Section 4: Appendices

- A. Protection Recommendations
- B. Regulated Facilities within the Water Supply Protection Area
- C. Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas
- D. Additional Documents on Source Protection

Additional Documents:

To help with source protection efforts, more information is available by request or online at www.state.ma.us/dep/brp/dws including:

- 1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
- 2. MA DEP SWAP Strategy
- 3. Land Use Pollution Potential Matrix
- 4. Draft Land/Associated Contaminants Matrix

What is a Zone III?

A Zone III (the secondary recharge area) is the land beyond the Zone II from which surface and ground water drain to the Zone II and is often coincident with a watershed boundary.

The Zone III is defined as a secondary recharge area for one or both of the following reasons:

- 1. The low permeability of underground water bearing materials in this area significantly reduces the rate of groundwater and potential contaminant flow into the Zone II.
- 2. The groundwater in this area discharges to a surface water feature such as a river, rather than discharging directly into the aquifer.

The land uses within the Zone III are assessed only for sources that are shown to be groundwater under the direct influence of surface water.

For More Information

Contact Anita Wolovick in DEP's Wilmington Office at (978) 661-7768 for more information and assistance on improving current protection measures.

Copies of this report have been provided to the public water supplier, town boards, and the local media.

Table 3: Current Protection and Recommendations

Protection Measures	Status	Recommendations
Zone A		
Does the Public Water Supplier (PWS) own or control the entire Zone I and/or Zone A?	YES (Zone I for all Wells)	Follow Best Management Practices (BMP's) that focus on good housekeeping, spill prevention, and operational practices to reduce the use and release of hazardous materials.
	NO (Nagog Pond)	To the extent possible, remove prohibited activities in Zone A to comply with DEP's Zone A requirements.
Are the Zone I and Zone A posted with "Public Drinking Water Supply" Signs?	YES	Additional economical signs are available from the Northeast Rural Water Association (802) 660-4988.
Are the Zone I and Zone A regularly inspected?	YES	Continue daily inspections of drinking water protection areas.
Are water supply-related activities the only activities within the Zone I and Zone A?	YES (Zone I for all Wells except Hugh Cargill Wellfield)	Continue monitoring for non-water supply activities in Zone I.
	NO (Hugh Cargill Wellfield, Nagog Pond)	Monitor prohibited activities in Zone A, and investigate options for removing these activities (planting of rye in Zone I of Hugh Cargill Wellfield was agreed upon by DEP provided no pesticides or fertilizers are used, and no machinery is stored in the Zone I).
Municipal Controls (Zoning Bylaws, Health Regulations, and General Bylaws)		
Does the municipality have Surface Water Protection Controls that meet 310 CMR 22.20C and Wellhead Protection Controls that meet 310 CMR 22.21(2)	YES	For additional source protection measures, refer to www.state.ma.us/dep/brp/dws .
Do neighboring communities protect the water supply protection areas extending into their communities?	SOME	Acton and Littleton do not have controls that protect Nagog Pond. Lincoln, Maynard, and Sudbury have incorporated adjacent community Zone IIs in their Groundwater Protection Overlay Districts. Request that municipal officials in Acton and Littleton develop land use restrictions that meet 310 CMR 22.20B and 310 CMR 22.20C.
Planning		
Does the PWS have a local surface water and wellhead protection plan?	YES	Continue the implementation of water supply protection plan. Follow "Developing a Local Surface Water Supply Protection Plan" available at: www.state.ma.us/dep/brp/dws/ . Develop a wellhead protection plan. Follow "Developing a Local Wellhead Protection Plan" available at: www.state.ma.us/dep/brp/dws/ .
Does the PWS have a formal "Emergency Response Plan" to deal with spills or other emergencies?	YES	Augment plan by developing a joint emergency response plan with fire department, Board of Health, DPW, and local and state emergency officials. Coordinate emergency response drills with local teams.
Does the municipality have a watershed and wellhead protection committee?	NO	Establish a committee with representatives from citizens' groups, neighboring communities, and the business community.
Does the Board of Health conduct inspections of commercial and industrial activities?	YES	For more guidance see "Hazardous Materials Management: A Community's Guide" at www.state.ma.us/dep/brp/dws/files/hazmat.doc
Does the PWS provide watershed protection education?	YES	Education is done through providing protection information to residents in Zone C of Nagog Pond. Material is provided to the public at Concord Town House, library, and schools. Other outreach occurs through the annual Consumer Confidence Report. Increase residential outreach through bill stuffers, Drinking Water Week activities, and coordination with local groups. Aim additional efforts at commercial and municipal uses within the Zone IIs and Zone C.

APPENDIX A: DEP PERMITTED FACILITIES WITHIN CONCORD'S WATER SUPPLY PROTECTION AREAS

DEP FACILITY NUMBER	FACILITY NAME	STREET ADDRESS	TOWN	PERMITTED ACTIVITY	ACTIVITY CLASS
36804	CONCORD CARLISLE REGIONAL SCHOOL	133 KEYES RD	CONCORD	HANDLER	VERY SMALL QUANTITY GENERATOR
136540	CUMBERLAND FARMS	120 THOREAU ST	CONCORD	FUEL DISPENSER	FUEL DISPENSER
130603	EMERSON HOSPITAL	133 OLD RD TO NINE ACRE RD	CONCORD	HANDLER	SMALL QUANTITY GENERATOR
130603	EMERSON HOSPITAL	133 OLD RD TO NINE ACRE RD	CONCORD	HANDLER	SMALL QUANTITY GENERATOR - WASTE OIL/PCBS ONLY

UNDERGROUND STORAGE TANKS WITHIN CONCORD'S WATER SUPPLY PROTECTION AREAS

FACILITY NAME	ADDRESS	TOWN	DESCRIPTION	CAPACITY (GAL)	CONTENTS
CONCORD COUNTRY CLUB	246 OLD RD TO NINE ACRE CORNER	CONCORD	COUNTRY CLUB/GOLF COURSE	1000	GASOLINE
CONCORD COUNTRY CLUB	246 OLD RD TO NINE ACRE CORNER	CONCORD	COUNTRY CLUB/GOLF COURSE	550	DIESEL
CUMBERLAND FARMS	120 THOREAU ST	CONCORD	GAS STATION	6000	GASOLINE
CUMBERLAND FARMS	120 THOREAU ST	CONCORD	GAS STATION	6000	GASOLINE
CUMBERLAND FARMS	120 THOREAU ST	CONCORD	GAS STATION	6000	GASOLINE
EMERSON HOSPITAL	133 OLD RD TO NINE ACRE CORNER	CONCORD	HOSPITAL	15000	FUEL OIL
EMERSON HOSPITAL	133 OLD RD TO NINE ACRE CORNER	CONCORD	HOSPITAL	4000	DIESEL

For more information on underground storage tanks, visit the Massachusetts Department of Fire Services web site: <http://www.state.ma.us/dfs/ust/ustHome.htm>

Note: This appendix includes only those facilities within the water supply protection area(s) that meet state reporting requirements and report to the appropriate agencies. Additional facilities located within the water supply protection area(s) should be considered in local drinking water source protection planning.

APPENDIX B – Table of Tier Classified Oil and/or Hazardous Material Sites within Concord Water Supply Protection Areas

DEP's datalayer depicting oil and/or hazardous material (OHM) sites is a statewide point data set that contains the approximate location of known sources of contamination that have been both reported and classified under Chapter 21E of the Massachusetts General Laws. Location types presented in the layer include the approximate center of the site, the center of the building on the property where the release occurred, the source of contamination, or the location of an on-site monitoring well. Although this assessment identifies OHM sites near the source of your drinking water, the risks to the source posed by each site may be different. The kind of contaminant and the local geology may have an effect on whether the site poses an actual or potential threat to the source.

The DEP's Chapter 21E program relies on licensed site professionals (LSPs) to oversee cleanups at most sites, while the DEP's Bureau of Waste Site Cleanup (BWSC) program retains oversight at the most serious sites. This privatized program obliges potentially responsible parties and LSPs to comply with DEP regulations (the Massachusetts Contingency Plan – MCP), which require that sites within drinking water source protection areas be cleaned up to drinking water standards.

For more information about the state's OHM site cleanup process to which these sites are subject and how this complements the drinking water protection program, please visit the BWSC web page at <http://www.state.ma.us/dep/bwsc>. You may obtain site -specific information two ways: by using the BWSC Searchable Sites database at <http://www.state.ma.us/dep/bwsc/sitellst.htm>, or you may visit the DEP regional office and review the site file. These files contain more detailed information, including cleanup status, site history, contamination levels, maps, correspondence and investigation reports, however you must call the regional office in order to schedule an appointment to view the file.

The table below contains the list of Tier Classified oil and/or Hazardous Material Release Sites that are located within your drinking water source protection area.

Table 1: Bureau of Waste Site Cleanup Tier Classified Oil and/or Hazardous Material Release Sites (Chapter 21E Sites) - Listed by Release Tracking Number (RTN).

RTN	Release Site Address	Town	Contaminant Type
3-0018998	133 Old Road To 9 Acre Corner	Concord	Oil
3-0019129	275 Holdenwood Road	Concord	Oil
3-0000435	100 North Road	Sudbury	Oil

For more location information, please see the attached map. The map lists the release sites by Release Tracking Number (RTN).